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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,469

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Frank Peng

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EXAMINER

CORDRAY, DENNIS R

ART UNIT

PAPER NUMBER

1731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/526,469

Applicant(s)

PENG ET AL.

Examiner

Dennis Cordray

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☒ Claim(s) 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/18/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pp 13-15, filed 11/15/2006, with respect to the rejection(s) of claim(s) under 35 U.S.C. 103(a) have been fully considered and are partially persuasive. The Bystedt reference teaches that compression of wood chips is problematic and not applied in practice, and discloses instead compression of blocks of wood and staves having a particular fiber length. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made as detailed below.

2. With respect to Applicant's arguments regarding the disclosure of Vaheri et al, the following comments are provided.

Applicant argues on pp 13-15 that Vaheri et al uses the enzymes for a different objective than the instant invention, to act on the hemicellulose or cellulose in a fibrous product to achieve an energy reduction in the production of mechanical pulp. Applicant further argues that Vaheri et al fails to suggest the advantages discovered according to the instant invention. Applicant argues that, if pectinase had been used by Vaheri et al, it would have been discovered that it does not decompose the hemicellulose or cellulose. Applicant argues that the treatment of Vaheri et al is done on a coarsely separated pulp rather than on wood chips.

Vaheri et al discloses that fibrous products used to make mechanical pulps of the invention include whole wood, wood chips or once-refined pulp (coarsely separated pulp), thus wood chips are also disclosed (p 2, lines 2-23). Vaheri et al does not recite

Art Unit: 1731

a long laundry list of potential enzymes from which one would need to pick and choose to arrive at the instant invention, but four specific enzymes, including pectinase produced by the fungi *Aspergillus*. Vaheri et al adds the pectinase to the wood chips to achieve an energy reduction in the production of mechanical pulp (p 2, lines 15-21).

Eachus et al teaches an improved method for impregnating wood chips with a biological agent, such as an enzyme, comprising compressing the wood substrate prior to addition, allowing and even aiding the biological agent to penetrate the wood (Abs; p 4, line 21 to p 5, line 2). Vaheri et al teaches that the enzyme reaction requires good contact with as large of a fiber area as possible (p 2, lines 23-24), thus providing motivation to one of ordinary skill in the art to combine the pretreatment of Eachus et al with the process of Vaheri et al to achieve good penetration of the wood with the enzyme and a large area of contact.

The method steps of the instant claims create a structure or product. The same method steps are recited by Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary and Forde Kohler et al, and the same structure or product will be made. Where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent. Regardless of the purpose for the treatment of Vaheri et al, once the chips are impregnated with the pectinase, at the temperatures

Art Unit: 1731

and times disclosed by Vaheri et al, the same pectolytic action will occur as discussed in the instant invention and the same advantages will be realized.

Examiner's Note

3. It is noted by the Examiner that the refining energy required for obtaining a specific freeness for Sample 6, as shown on p 10, Table 3, is significantly higher than the values for similar freeness for any of the other pectinase-treated samples and is similar to the values required for Sample 1, which was impregnated only with water. Also, the results shown for Sample 6 do not agree with the statement on p 11, lines 2-4 that the refining energy consumption for all samples with pectinase treatment is lower compared to Sample 3.

Specification

4. The disclosure is objected to because of the following informalities: on p 4, line 21, the heading "DETAILED DESCRIPTION OF THE INVENTION" should precede the sentence in line 19.

5. Claim 29 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 29 recites the limitation "a temperature in the retention after uptake of the impregnation liquid is 20 to 100 °C," which is identical to the limitation recited in Claim 12, from which Claim 29 depends.

Appropriate correction is required.

Drawings

6. The drawings are objected to because the results for Freeness vs. Specific Refining Energy for Sample 6, shown in Figure 3, do not agree with the tabulated results in Table 3 on p 10. For instance, Table 3 lists a refining energy of 2082 kWh/t to obtain a freeness of 150, whereas Figure 3 indicates approximately 1700 kWh/t for the same freeness. Similar discrepancies occur for the other freeness values for Sample 6.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 9 and 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 9 recites the broad recitation "2,000,000 to 200,000,000", and the claim also recites "10,000,000 to 50,000,000" which is the narrower statement of the range/limitation.

Claims 23 and 24 recite a steaming pretreatment of the fiber material, but fail to provide the temperature or pressure conditions of the steaming treatment, thus making the claimed process indefinite.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-4, 6-7, 9, 11-13, 18-19, 21-25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaheri et al (EP 0430915 A1) in view of Eachus et al (WO 97/40194) and evidenced by Webster's II New Riverside University Dictionary.

Claims 1, 6-7 and 21: Vaheri et al discloses a method of making mechanical pulp from a fibrous product comprising treating the fiber with an enzyme containing liquid, with pectinase produced by the fungi *Aspergillus* as a preferred enzyme or, in some embodiments, a mixture comprising pectinase and other enzymes (Abs; p 2, lines 2-3, 15-18 and 22-23). After the enzyme treatment, the fibrous product is twice refined, which defibrates the product (p 2, lines 46-49).

Vaheri et al does not disclose initially compressing the fibrous material. Vaheri et al also does not disclose impregnating the fibers with pectinase, selectively weakening a pectin-rich region or hydrolysis of the pectins.

Eachus et al discloses an improved method for biological pretreatment of wood chips comprising compressing the wood substrate prior to addition of a structure-altering effective amount of at least one fungi or bacteria, or one of more culture products thereof, such as enzymes. The compression allows the biological agent to

Art Unit: 1731

penetrate the wood structure and aids the penetration by drawing the agent into the wood substrate (Abs; p 4, line 21 to p 5, line 2). The process is described in the context of converting wood chips into pulp (p 5, lines 3-4).

Webster's Dictionary defines "pectinase" as a plant enzyme that catalyzes the hydrolysis of pectin, therefore it has pectolytic activity.

The art of Vaheri et al, Eachus et al, Vaheri et al, Webster's Dictionary and the instant invention is analogous as pertaining to pectinase and making mechanical pulps. Vaheri et al teaches that the enzyme reaction requires good contact with as large of a fiber area as possible (p 2, lines 23-24), thus impregnating the wood with the pectinase would have been obvious to one of ordinary skill in the art. It would have been obvious to one of ordinary skill in the art to pretreat the wood chips by compression in the method of Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary to facilitate penetration of the pectinase into the wood structure (impregnating the fiber material). The structure created by pretreating the wood chips of Vaheri et al using the method of Eachus et al is substantially identical to the structure claimed. Since pectinase catalyzes hydrolysis of pectin as evidenced by the definition of pectinase, the pectinase will selectively weaken pectin-rich regions by hydrolyzing the pectins or, at least, it would have been obvious to one of ordinary skill in the art to obtain hydrolysis of the pectin thereby weakening the pectin-rich regions. Where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the

Art Unit: 1731

structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent. Since the structure is the same, obtaining the claimed mechanical pulp would also have been obvious.

Claims 2, 4 and 25: Vaheri et al does not disclose mechanical compression or the compression ratio. Eachus et al discloses compressing the wood mechanically by a compression screw or roll press device (p 3, lines 8-9). A compression ratio of 4:1, which lies within the claimed range, is recited as an example (p 6, lines 25-29). It would have been obvious to one of ordinary skill in the art to use the disclosed devices and compression ratio to obtain good penetration of the enzyme into the wood.

Claims 3 and 22-24: Vaheri et al does not disclose a thermal pretreatment before impregnation. Eachus et al discloses pretreatment of the wood prior to treatment with a biological agent to remove, destroy or disable unwanted microorganisms, non-biological agents and contaminants in the wood. The pretreatment is by steaming the wood for 1 to 2 minutes at atmospheric pressure (p 8, lines 20-25). It would have been obvious to one of ordinary skill in the art to steam the wood prior to enzyme treatment to prevent problems from unwanted microorganisms or contaminants. Steaming for the additional amount of time claimed in Claim 24 would also have been obvious to soften the wood and make it easier to compress.

Claim 9: Vaheri et al does not disclose the amount of pectinase to be used. Eachus et al discloses that the selection of temperature, pH, retention time and the biological agent are within the ability of one skilled in the art (p 7, lines 19-21; p 9, lines 8-14). Preparation of the medium comprising the biological agent and the concentration

Art Unit: 1731

or activity level of the agent are also within the purview of one of ordinary skill in the art (p 10, line 29 to p 11, line 3). It would thus have been obvious to one of ordinary skill in the art to determine and obtain the claimed charge of pectinase through routine experimentation.

Claims 11-13, 27 and 29-30: Vaheri et al discloses treatment at a temperature from 10 to 90 °C in a pH range from 2 to 10, preferably from 4 to 8 (p 2, lines 27-30), which conditions lie within or significantly overlap the claimed ranges. An example is given of using a retention time of 3 hours after impregnation (p 2, lines 43-44).

Claims 18-19: Vaheri et al discloses processing wood chips. The use of hardwood and softwood, as well as the claimed non-wood sources of fiber, is well known in papermaking pulps, thus it would have been obvious to use wood chips from hardwood, softwood or non-wood sources as typically known in the art.

Claim 28: Vaheri et al does not disclose a retention time of 30 to 120 minutes. Eachus et al discloses that the enzyme treatment be performed at a temperature from 10 to 100 °C at a pH from 2 to 11 (p 7, lines 14-19) for a retention time of 1 to 48 hours and preferably about 2 to 6 hours (p 9, lines 6-8), the disclosed times overlapping the claimed values. Eachus et al discloses that the temperature, pH and time will vary depending on the biological agent and the nature or degree of structure alteration desired, and that the parameters are within the ability of the skilled practitioner in the art. It thus would have been obvious to one of ordinary skill in the art to determine and obtain the claimed retention times.

Art Unit: 1731

9. Claims 14 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaheri et al in view of Eachus et al and evidenced by Webster's II New Riverside University Dictionary and Forde Kohler et al (IPST Technical Paper Series Number 581).

Vaheri et al discloses refining in multiple steps using a Sprout Waldron refiner with diminishing blade distance, which the Examiner construes to mean a conical refiner. Vaheri et al does not disclose a double disc refiner.

Eachus et al discloses two stage refining of the treated wood chips using a Model 418 Andritz Sprout-Bauer pressurized refiner and a Model 401 atmospheric pressure refiner (p 11, lines 11-14; p 12, lines 10-13; p 13, lines 9-13). Both refiners are double disc refiners (if evidence is needed, see Forde Kohler et al, p 2, heading "Refining", subheading "Pilot Scale.")

The art of Vaheri et al, Eachus et al, Vaheri et al, Webster's Dictionary, Forde Kohler et al and the instant invention is analogous as pertaining to pectinase and making mechanical pulps. It would have been obvious to one of ordinary skill in the art to use pressurized and /or atmospheric pressure disc refiners in the process of Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary and Forde Kohler et al as typical refiners for wood chips. The disclosed refiners are made to operate at atmospheric pressure or above, thus overlaying the claimed pressure range. Obtaining the claimed operating pressures would have been obvious.

Art Unit: 1731

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary, as applied to Claim 1 above, and further in view of Christgau et al (5830734).

Vaheri et al, Eachus et al and Webster's Dictionary do not recite microorganisms containing *Aspergillus aculeatus* and *Aspergillus oryzae*. Vaheri et al does recite pectinase produced by the fungi *Aspergillus* as a preferred enzyme.

Christgau discloses that polygalacturonase and pectin lyase (i.e., pectinase) arise from a group of microorganisms containing *Aspergillus aculeatus* and *Aspergillus oryzae* (col. 7, lines 41-54).

The art of Vaheri et al, Eachus et al, Webster's Dictionary and the instant invention are analogous as pertaining to enzymes and pectinase in particular. It would have been obvious at the time of the invention to obtain pectinase arising from a group of microorganisms containing *Aspergillus aculeatus* and *Aspergillus oryzae* in the paper of Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary and further in view of Christgau et al as a functionally equivalent source.

11. Claims 10, 26 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary, as applied to Claim 1 above, and further in view of Logan et al (3948449).

Vaheri et al, Eachus et al and Webster's Dictionary do not recite addition of a chelating agent or sulfite, or a refining pressure of 5-8 bars.

Art Unit: 1731

Logan et al discloses a method of making a mechanical pulp by refining wood chips under a pressurized atmosphere of 0 to 85 psig, which encompasses the claimed pressures (col 1, lines 29-35, col 2, lines 24-35; col 3, lines 7-67 and Table 1). Pressure refining results in lower energy usage, higher freeness and more long fibers, which impart paper with a high resistance to tearing (col 4, lines 45-62). Prior to refining, the wood is subjected to preliminary heating with beneficial results (col 4, lines 3-6). Logan et al discloses that addition of sodium sulfite to the wood results in improved strength properties (col 9, lines 13-16). Examples are given of sodium sulfite additions from 5 to 13% based on oven dried fibers (45 to 118 kg/ton), which overlaps the claimed range (cols 7-8, Table III). Logan et al discloses that the addition of chelating agents (such as Versenex 80, a commercially available aqueous solution of pentasodium salt of diethylenetriaminepentaacetic acid) enhances brightness when used with sodium hydrosulphite (col 9, lines 20-27). The above compounds can be added in groups of two or more thus are usable together (col 9, lines 27-29).

The art of Vaheri et al, Eachus et al, Webster's Dictionary, Logan et al and the instant invention is analogous as pertaining to pectinase and methods of making mechanical pulp. It would have been obvious to add sodium sulfite, sodium hydrosulphite and a pentasodium salt of diethylenetriaminepentaacetic acid, which ionizes in water to provide diethylenetriaminepentaacetic acid, to the process of Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary, as applied to Claim 1 above, and further in view of Logan et al as chemicals well known in the art to enhance the strength and brightness of the refined fibers. While not expressly recited

Art Unit: 1731

by Logan et al, diethylenetetraminepentaacetic acid is similar in structure to diethylenetriaminepentaacetic acid and would have similar properties, thus would also have been obvious to add to the process in place of the diethylenetriaminepentaacetic acid as a functionally equivalent option. Refining at the claimed pressures would have been obvious to provide longer fibers and higher tear strength to paper made from the fibers.

12. Claims 15-17, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary, as applied to Claim 1 above, and further in view of Casey (James P. Casey, Ed., Pulp and Paper Chemistry and Chemical Technology, 3rd Ed., Vol. 1, 1980, John Wiley & Sons, pp. 217, 224, and 226).

Vaheri et al, Eachus et al and Webster's Dictionary do not expressly disclose a refiner rotation speed. Casey discloses conventional refiners, and discloses single-rotating disk refiners having a speed of rotation of 1,500 or 1,800 rpm (pg. 224, last par, lines 12-14), and double-disk refiners with rotation speeds of 2400 or 3000 rpm (pg. 224, last par, lines 5-8).

The art of Vaheri et al, Eachus et al, Webster's Dictionary, Casey and the instant invention are analogous as pertaining to pectinase and the refining of pulp. It would have been obvious to one of ordinary skill in the art to the claimed refiner speeds for making the mechanical pulp of Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary and further in view of Casey as conventional refiner speeds.

Art Unit: 1731

Determination of the appropriate pressure for the pressurized refiner would have been within the purview of one of ordinary skill in the art. The steam treatment preheats the wood prior to the refining step.

13. Claims 20 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary, as applied to Claim 1 above, and further in view of Falk et al (WO 92/20855).

Vaheri et al, Eachus et al and Webster's Dictionary do not disclose that the pulp is bleached after refining. Falk discloses that the pulp obtained after defibration and refining is bleached with alkaline peroxide (pg. 2, lines 20-24), to obtain bleached pulp having high brightness (pg. 5, lines 9-13).

The art of Vaheri et al, Eachus et al, Webster's Dictionary, Falk et al and the instant invention are analogous as pertaining to pectinase and the refining of pulp. It would have been obvious to one of ordinary skill in the art to bleach the refined pulp with alkaline peroxide in the process of Vaheri et al in view of Eachus et al and evidenced by Webster's Dictionary, and further in view of Falk et al to further brighten the pulp.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

Art Unit: 1731

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DRC


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